

Appl. No. 10/533,860
PTO OA dated December 2, 2008
Amd. B Dated December 3, 2008

Atty. Docket No. 28944/40153

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended) A method of training a device for linearizing a radiofrequency amplifier which is included within a radiofrequency transmitter of a first equipment of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst comprising symbols belonging to a determined alphabet of symbols, the method comprising the steps consisting in:

- a) generating a linearization training sequence comprising a determined number N of symbols, where N is a determined integer;
- b) transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter and thereby generating an aggregate linearization transmission spectrum of the N symbols of the linearization training sequence;
- c) comparing the linearization training sequence transmitted with the linearization training sequence generated so as to train said linearization device,
wherein at least a determined number N1 of symbols of the linearization training sequence sent first, where N1 is a determined integer less than or equal to N, belong to a subalphabet of symbols included within said alphabet of symbols, said subalphabet of symbols consisting of symbols which, in isolation or combination when considering an aggregate spectrum of the transmission of the N1 symbols alone, produce a narrower spectrum respective to the aggregate linearization spectrum of the N symbols said alphabet of symbols as a whole and N1 is a determined integer at least as large as the number of symbols in the subalphabet of symbols and the N symbols contain at least one symbol outside the subalphabet of symbols.

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Claim 2 (previously presented) The method of Claim 1, wherein the linearization training sequence comprises a determined number N2 of other symbols transmitted last, at least certain of which belong to the alphabet of symbols excluding said subalphabet of symbols, wherein N2 is an integer less than N.

Claim 3 (previously presented) The method of Claim 2, wherein a majority or the totality of said N2 other symbols transmitted last belong to the alphabet of symbols excluding said subalphabet of symbols.

Claim 4 (previously presented) The method of Claim 2, wherein N1+N2=N.

Claim 5 (previously presented) The method of Claim 1, according to which the number N is fixed.

Claim 6 (currently amended) The method of Claim 1, according to which the linearization training sequence occupies only a part of the burst bursts in which it is transmitted.

Claim 7 (currently amended) The method of Claim 6, wherein the linearization training sequence occupies around 5% of the duration of the any burst in which it is transmitted.

Claim 8 (currently amended) The method of Claim 1, wherein the linearization training sequence is transmitted at the start of the determined frame structure.

Claim 9 (previously presented) The method of Claim 1, wherein the linearization training sequence is further transmitted during a change of logical channel, a change of frequency and/or a change of power rating of the first equipment.

Claim 10 (currently amended) The method of Claim 1, wherein the training sequence is included within or includes a sequence of symbols that is designed moreover to allow the dynamic control of

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the gain of a variable-gain amplifier of a radiofrequency receiver of a second item of equipment of the radiocommunication system with which said first equipment communicates.

Claim 11 (currently amended) A device for training a device for linearizing a radiofrequency amplifier of a radiofrequency transmitter which is included within a first equipment of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst comprising symbols belonging to a determined alphabet of symbols, the device comprising:

- a) means for generating a linearization training sequence comprising a determined number N of symbols, where N is a determined integer;
- b) means for transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the transmitter;
- c) means for comparing the linearization training sequence transmitted with the linearization training sequence generated so as to train said linearization device,
wherein at least a determined number N1 of symbols of the linearization training sequence sent first, where N1 is a determined integer less than or equal to N, belong to a subalphabet of symbols included within said alphabet of symbols, said subalphabet of symbols consisting of symbols which, in isolation or combination, produce a narrower transmission spectrum respective to any combination of said alphabet of symbols as a whole.

Claim 12 (previously presented) The device of Claim 11, wherein the linearization training sequence comprises a determined number N2 of other symbols transmitted last, at least certain of which belong to the alphabet of symbols excluding said subalphabet of symbols, wherein N2 is an integer less than N.

Claim 13 (previously presented) The device of Claim 12, wherein a majority or the totality of said N2 other symbols transmitted last belong to the alphabet of symbols excluding said subalphabet of symbols.

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Claim 14 (previously presented) The device of Claim 12, wherein N1+N2=N.

Claim 15 (previously presented) The device of Claim 11, wherein the number N is fixed.

Claim 16 (currently amended) The device of Claim 11, wherein the linearization training sequence occupies only a part of the burst bursts in which it is transmitted.

Claim 17 (currently amended) The device of Claim 16, wherein the linearization training sequence occupies around 5% of the duration of the any burst in which it is transmitted.

Claim 18 (currently amended) The device of Claim 11, wherein the means for transmitting are adapted for transmitting the linearization training sequence at the start of the determined frame structure.

Claim 19 (previously presented) The device of Claim 11, wherein the means for transmitting are adapted for transmitting the linearization training sequence during a change of logical channel, a change of frequency and/or a change of power rating of the first equipment.

Claim 20 (currently amended) The device of Claim 11, wherein the training sequence is included within or includes a sequence of symbols that is designed moreover to allow the dynamic control of the a gain of a variable-gain amplifier of a radiofrequency receiver of a second wherein equipment of the radiocommunication system with which said first item of equipment communicates.

Claim 21 (previously presented) A mobile terminal of a radiocommunication system, comprising a radiofrequency transmitter having a radiofrequency amplifier and a device for linearizing the radiofrequency amplifier, further comprising a device for training the linearization device as claimed in claim 11.

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Claim 22 (previously presented) A base station of a radiocommunication system comprising a radiofrequency transmitter having a radiofrequency amplifier and a device for linearizing the radiofrequency amplifier, further comprising a device for training the linearization device as claimed in claim 11.

Claims 23-31 (cancelled).